

Atlona Stereo/Mono Audio Amplifier

AT-PA100-G2



User Manual

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Introduction

Small, energy efficient, and affordable the Atlona Stereo/Mono Audio Amplifier fits the needs of most offices, classrooms and more. Unlike traditional A/B amplifiers the Class D audio amplifier is energy efficient and easily integrated behind a TV where space is limited.

Package Contents

- 1 x AT-PA100-G2
- 1 x AC Adapter
- 1 x User Manual

Features

- AT-PA100-G2 is a class D amplifier which uses less energy, doesn't require heat syncs or power transformers, making it smaller than a class A/B amplifier
- Stereo, mono, and bridge audio speaker output connections available through captive screw
- Has a variable 3.5mm audio loop out for cascading to another AT-PA100-G2 or connecting to other audio amplifiers
- 3 pin captive screw MIC input can support balanced and unbalanced signals (suppresses external noise)
- Energy efficient standby mode only requires 0.4Ws of power. AT-PA100-G2 goes into standby mode if an audio signal isn't present
- Control through the panel buttons, an (optional) IR remote, and RS-232
- 3 position input switch:
 - 48V phantom power - best for condenser MICs without battery power
 - MIC - Great for Dynamic MICs and battery powered condenser MICs
 - Line - Connect a Wireless MIC
- Volume, Bass, and Treble can be controlled through RS-232, IR, or panel buttons

Specifications

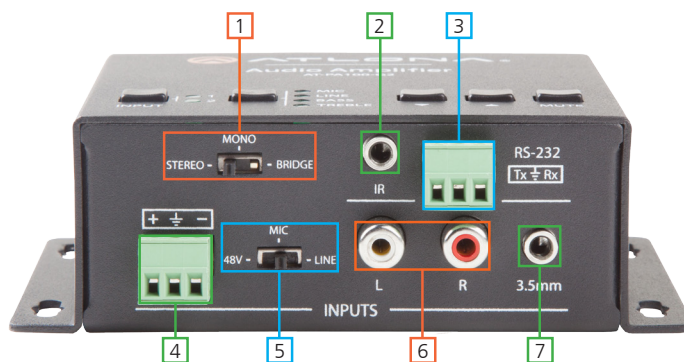
Input Ports	2 x RCA connectors 1 x 3.5mm Audio 1 x 3.5mm IR 1 x Captive Screw MIC 1 x Captive Screw RS-232
Output Ports	1 x Captive Screw Audio 1 x 3.5mm Loop Out
Dimensions (HxWxD)	1.5 x 3.78 x 3.43 (inch) or 38 x 96 x 87 (mm)
Weight	0.66lbs or 0.3kg
Power consumption	3.6W

Audio

Gain:	32dB
Frequency Range:	20Hz to 20KHz
Signal/Noise Ratio:	80dB (at max output)
Total Harmonic Distortion:	1% (1KHz), 0.3% (20KHz) -- at nominal levels
Input Impedance:	Input 1&2: >10K Ω
MIC Input Impedance:	48V: 35K Ω MIC: 10K Ω LINE: 75K Ω
Output Impedance:	3.5mm Loop Out: 50 Ω stereo Speaker out: 4 ~ 8 Ω Amplifier
Stereo Channel Separation:	>75dB from 20Hz to 20KHz
Common Mode Rejection Ratio:	>70dB from 20Hz to 20KHz
MIC Audio Detection Delay:	1ms

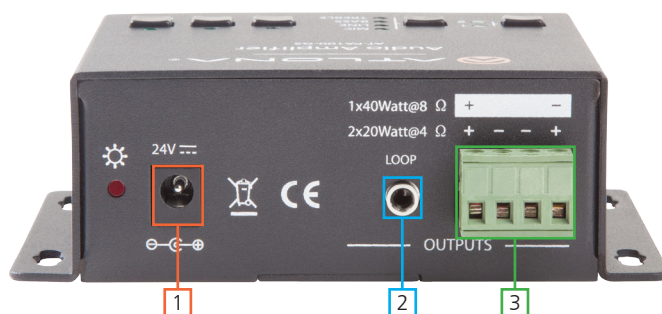
Panel Description

Front Panel



1. Audio output format switch: Use to switch between Stereo, Dual Channel Mono, and Bridged audio outputs
2. 3.5mm IR: Connect optional IR receiver here for use with optional IR remote (AT-PA1-IR)
3. Captive Screw RS-232: Connect RS-232 here for control
4. Captive Screw Input: Connect a MIC
5. Audio input switch: Switch between 48V Phantom powered condenser MIC, Dynamic MIC, or LINE
6. L/R audio: Connect Analog audio into this port
7. 3.5mm audio: Connect Analog audio into this port

Back Panel



1. 24V Port: Connect included power supply here.
2. 3.5mm variable audio loop out: Loop out to another AT-PA100-G2 or audio amplifier with a 3.5mm stereo audio connector
3. Captive Screw Audio: Connect to speakers

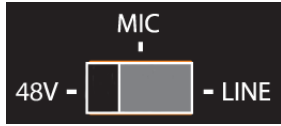
Top Panel



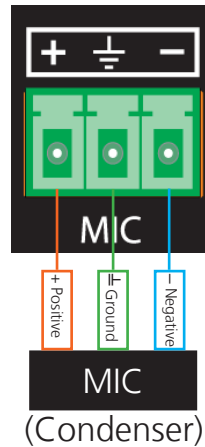
1. Input Selection Button: Toggle between the RCA input and 3.5mm audio input
2. Audio Control Button: Adjust the volume of the MIC, Line, or the level of Bass and Treble with this button
3. Volume adjustment buttons: Use the up and down arrows to turn the volume up or down or adjust the level of the Bass and Treble
4. Mute button: Use to mute the Line volume

MIC Connection

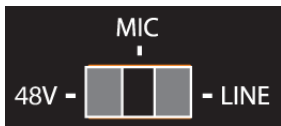
48V (Condenser MIC)



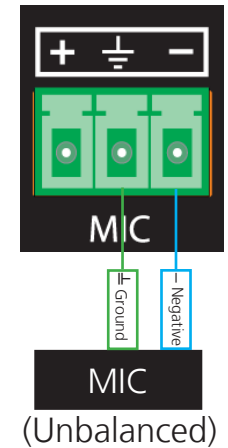
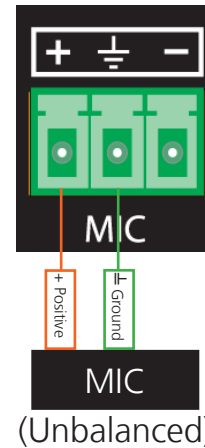
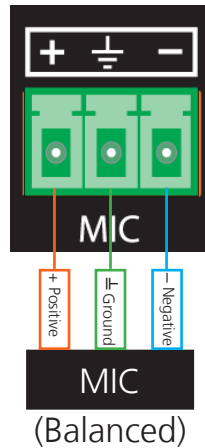
Connect a condenser MIC using Positive to the "+", negative to the "-", and your ground/power to the "⏏". The 48V option is for MICs that require phantom power from an external device. Typically used by condenser MICs. Only a balanced connection is used in this mode.



MIC (Dynamic MIC)



Connect Dynamic or Self-Powered Condenser MICs in this mode. Connections can be either balanced or unbalanced.

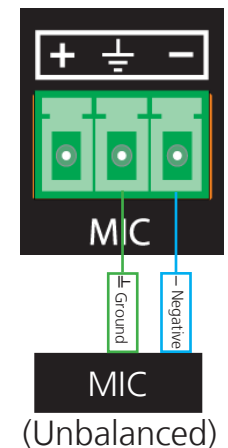
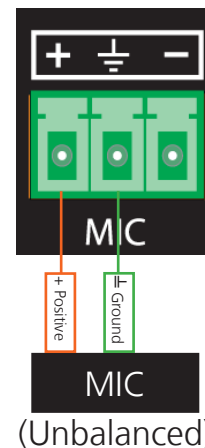
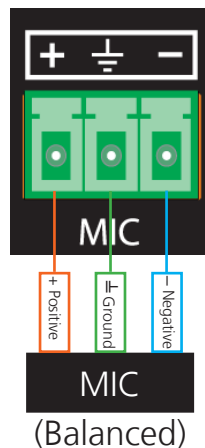


Either Unbalanced connection may be used.

Line Input (or Wireless MIC)



Connect Wireless MICs to this port. Either balanced or unbalanced connections may be used.

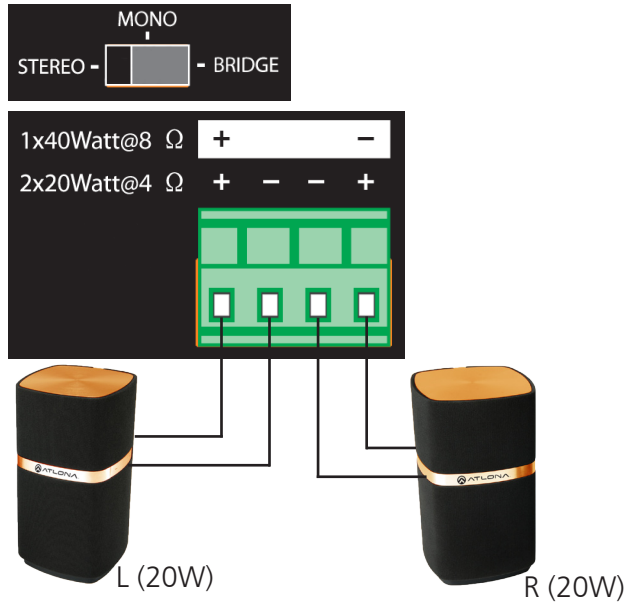


Either Unbalanced connection may be used.

NOTE: The MIC input has a power saving standby mode. When the MIC does not receive an audio signal for 8 seconds it will go into mute/standby mode.

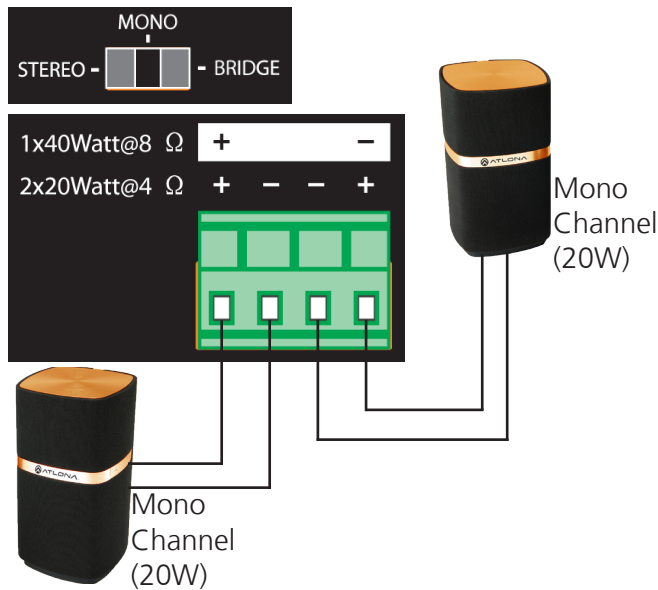
Output Connection

Stereo (Default)



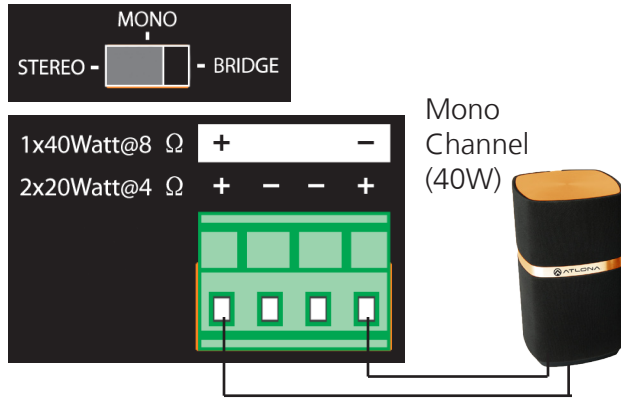
Default output connection is Stereo. Connect the "+" and "-" of the left side to the left speaker and the "+" and "-" of the right side to the right speaker. Each speaker receives 20W in this mode.

Mono (dual)



When Mono is selected, the audio output is Dual Channel Mono and will output 20W per channel in this mode.

Bridged



Bridged audio will combine both L and R channels into one and outputs 40W to a single speaker.

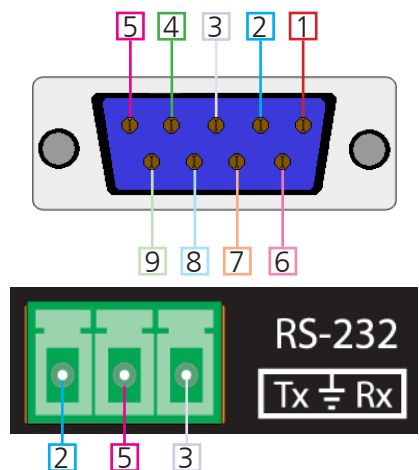
Connection and Installation



RS-232

Connection

RS-232 is connected through a 9-pin female D connector. The pins will have functions associated with them, some will be unassigned.



No.	Pin	Function
1	----	Not used
2	Tx	Transmit
3	Rx	Receive
4	----	Not used
5	Gnd	Ground
6	----	Not used
7	----	Not used
8	----	Not used
9	----	Not used

Baud Rate: 9600bps

Data Bit: 8bits

Parity: None

Stop Bit: 1bit

Command

The command codes are very sensitive, do not change capitalization, spacing, or lettering.

Command	Feedback	Description
1A1.	1A1	Switching the audio to input 1
2A1.	2A1	Switching the audio to input 2
0A0.	Mute Audio	Mute Audio of MIC and Line out
0A1.	UnMute Audio	UnMute Audio
1A0.	Mute MIC	Mute audio of MIC
2A0.	Mute LINE	Mute audio of line out
600%	A: 1 -> 1 Volume: 30 Bass: 00 Treble: 00	Shows the audio status
601%	Volume of MIC: 51	MIC volume up
602%	Volume of MIC: 51	MIC volume down
603%	Volume of LINE: 51	Line volume up
604%	Volume of LINE: 51	Line volume down
605%	Bass of LINE: 04	Bass level up
606%	Bass of LINE: 04	Bass level down
607%	Treble of LINE: 04	Treble level up
608%	Treble of LINE: 04	Treble level down
609%	A: 1 -> 1 Volume: 50 Bass: 04 Treble: 04	Resets back to default settings

Command	Feedback	Description
5xx%	Volume of MIC: xx	Preset MIC volume, [xx] arranges from [00] to [60]. Example: 509% --> Volume of MIC: 09
7xx%	Volume of LINE: xx	Preset line volume, [xx] arranges from [00] to [60]. Example: 723% --> Volume of LINE: 23
8xx%	Bass of LINE: xx	Preset the bass level, [xx] arranges from [00] to [08]. Example: 803% --> Bass of LINE: 03
9xx%	Treble of LINE: xx	Preset the treble level, [xx] arranges from [00] to [08]. Example: 905% --> Treble of LINE: 05

Do not use a carriage return at the end of the commands. "." and "%" terminate the commands.

Safety Information

Safeguards



To reduce the risk of electric shock, do not expose this product to rain or moisture



Do not modify the wall plug. Doing so will void the warranty and safety features.



If the wall plug does not fit into your local power socket, hire an electrician to replace your obsolete socket.



This equipment should be installed near the socket outlet and the device should be easily accessible in the case it requires disconnection.

Precautions

FCC regulations state that any unauthorized changes or modifications to this equipment, not expressly approved by the manufacturer, could void the user's authority to operate this equipment.

Operate this product using only the included external power supply. Use of other power supplies could impair performance, damage the product, or cause fires.

In the event of an electrostatic discharge this device may automatically turn off. If this occurs, unplug the device and plug it back in.

Protect and route power cords so they will not be stepped on or pinched by anything placed on or against them. Be especially careful of plug-ins or cord exit points from this product.

Avoid excessive humidity, sudden temperature changes or temperature extremes.

Keep this product away from wet locations such as bathtubs, sinks, laundries, wet basements, fish tanks, and swimming pools.

Use only accessories recommended by Atlona to avoid fire, shock, or other hazards.

Unplug the product before cleaning. Use a damp cloth for cleaning and not cleaning fluid or aerosols. Such products could enter the unit and cause damage, fire, or electric shock. Some substances may also mar the finish of the product.

Never open, remove unit panels, or make any adjustments not described in this manual. Attempting to do so could expose you to dangerous electrical shock or other hazards. It may also cause damage to your AT-PA100-G2. Opening the product will void the warranty.

Do not attempt to service the unit. Disconnect the product and contact your authorized Atlona reseller or contact Atlona directly.

Warranty

Limited Warranty

Atlona Technologies warrants that (a) its products (AT-PA100-G2) will perform substantially in accordance with the accompanying written materials for a period of 3 years from the date of receipt and (b) that the product will be free from defects in materials and workmanship under normal use and service for a period of 3 years. In the event applicable law imposes any implied warranties, the implied warranty period is limited to 3 years from the date of receipt. Some jurisdictions do not allow such limitations on duration of an implied warranty, so the above limitation may not apply to customers that fall within those areas.

Customer Remedies

Atlona Technologies' and its suppliers' entire liability and Customer's exclusive remedy shall be, at Atlona Technologies' decision, either return of the price paid for the product, repair, or replacement of the product that does not meet this Limited Warranty and which is returned to Atlona Technologies with a copy of the Customer's receipt. This Limited Warranty is void if failure of the product has resulted from accident, abuse, misapplication, or natural occurrence. In example but not limited to: power surges (electrical storms, local power outage), dropping the product (or items on the product), contact with fluids, and physical misconduct (i.e. kicking or punching). Any replacement product will be warranted for the remainder of the original warranty period.

No other warranties

To the maximum extent permitted by applicable law, Atlona Technologies and its suppliers disclaim all other warranties, either expressed or implied, including, but not limited to, implied warranties of merchantability and fitness for a particular purpose, with regard to the product and any related written materials. This Limited Warranty gives customer specific legal rights. Customers may have other rights depending on the jurisdiction.

No liability for damages

To the maximum extent permitted by applicable law, in no event shall Atlona Technologies or its suppliers be liable for any damages arising out of the use of or inability to use this product, even if Atlona Technologies has been advised of the possibility of such damages. Such damages include but are not limited to: special, incidental, consequential, or indirect damages for personal injury, loss of business profits, business interruption, loss of business information, or any other pecuniary loss. Atlona Technologies' and its suppliers' entire liability under any provision of this agreement shall be limited to the amount actually paid by you for the product. Some Jurisdictions do not allow the exclusion or limitation of liability for consequential or incidental damage. The above limitations may not apply to you in such jurisdictional cases.

Atlona Product Registration

Thank you for purchasing this Atlona product. - We hope you enjoy it and will take an extra few moments to register your new purchase.

Registration creates an ownership record if your product is lost or stolen and helps ensure you'll receive notification of performance issues and firmware updates.

At Atlona, we respect and protect your privacy, assuring you that your registration information is completely secure. Atlona product registration is completely voluntary and failure to register will not diminish your limited warranty rights.

To register go to: <http://www.atlona.com/registration>